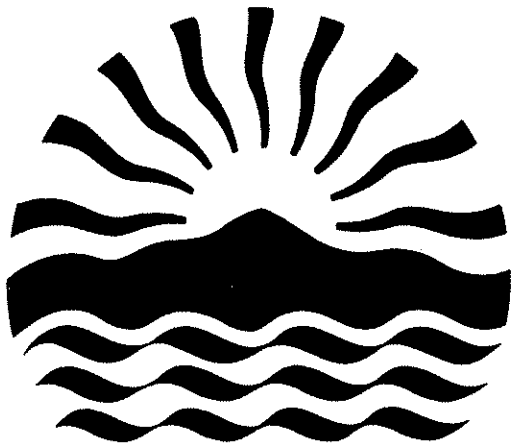

CITY OF
CHULA VISTA

Sewer Overflow Prevention Plan

California Regional Water Quality Control Board
San Diego Region
ORDER No. 2006-0003-DWQ
Revised 10-08

CITY OF
CHULA VISTA

SEWER OVERFLOW PREVENTION PROGRAM

The City of Chula Vista's Sewage Overflow Prevention Plan (SOPP) provides an overview of the city's program to prevent sewer spills. It has been prepared pursuant to the Waste Discharge Requirements issued the California Regional Water Quality Control Board, San Diego Region Order No. 96-04. This (SOPP) is designed to prevent, or minimize the potential for sewer overflows from the city's wastewater collection system.

The SOPP will provide a general overview of the city's wastewater collection system and sewer overflow prevention programs.

OVERVIEW OF THE WASTE WATER COLLECTION SYSTEM

The City of Chula Vista currently serves a population of over 200,000. The Wastewater Collection System section of the Public Works Operation is responsible for the operation and maintenance of approximately 476 miles of sewer mains, over 8,000 sewer access ports and 13 pump stations. From within the city's 50.6 square miles service territory, the City transmits average daily sewage flows of approximately 17 million gallons per day (mgd). The City's sewage is transported to the Metropolitan and the Spring Valley Outfall Sewer Trunk lines to the Point Loma Wastewater Treatment Plant.

SANITARY SEWER OVERFLOW PREVENTION MEASURES

The City's preventive and corrective maintenance programs consist of routine maintenance, repairs, and replacement of sewer mains, manholes, laterals and pump stations. The program provides for the inspection, cleaning, and related maintenance of all components of the collection system. Potential problems are input into the management software (GBA) and are scheduled for remedial work according to the severity of the problem. Larger and more complex projects are included in the Capital Improvement Projects (CIP) process for planning, design, and construction.

If a sewer overflow occurs due to a sewer main stoppage or mechanical breakdown, the problem is investigated and analyzed and remedial action is implemented. Maintenance schedules or cleaning methods are adjusted accordingly. If a repair or replacement to an infrastructure component is needed, the repair will be included in the CIP process, or be repaired by city crews.

Below are preventive measures that the City of Chula Vista incorporates in the sewer overflow prevention plan:

Maintenance Program

Preventive Measures:

A. Routine Sewer Main cleaning - Four combination vehicles clean city sewer mains on a daily basis. Individual cleaners can maintenance from 1,000 – 6,000 lineal feet a day.
B. Critical Main Cleaning Program - Monthly main cleaning of approximately five miles of low flow and known grease problem areas.
C. Chemical/Enzyme Application Program – Application of chemical/enzyme at 19 separate locations, 3-days a week at known grease problem areas.
D. Sewer Main and Manhole Inspection Program – Daily visual and/or televised inspection of sewer mains and manholes.
E. Sewer Main Replacement (C.I.P.) – Repair, replacement, or rehabilitation of impacted sewers to improve sewer flow velocities and/or increase volume.

Root Control

Preventive Measures:

A. Routine Sewer Main cleaning - Three combination vehicles (Vactors) clean city sewer mains on a daily basis.
B. Mechanical Rodding – Rodding known areas with root cutters on a quarterly, or as needed basis.
C. Sewer Main and Manhole Inspection Program – Daily visual and/or televised inspection of sewer mains and manholes for root intrusion.
D. Sewer Main Replacement (C.I.P.) – The repair, replacement, or rehabilitation of impacted sewers main lines to eliminate long-term root problems.

Control of Rocks, Debris and Vandalism

Preventive Measures:

A. Locking Sewer Manhole – Install locking manhole covers or sealing non-locking manhole covers in off-road and other secluded areas as well as previously vandalized manholes.
B. Sewer Main and Manhole Inspection Program – Daily visual and/ or televised inspection of sewer mains and manholes.

Pipeline Failure and Construction Damage

Preventive Measures:

A. Sewer Main and Manhole Inspection Program – Daily visual and/or televised inspection of sewer mains and manholes. Manholes and sewer main pipes are monitored for deterioration.
B. Sewer Main and Manhole Maintenance – Repair, relocation, and or protection of sewer mains and manholes from potential damage.
C. Sewer Main Replacement (C.I.P.) – The repair, replacement, and rehabilitation or relocation of sewers and manhole prone to damage by any source.
D. Dual Force Mains – Installation of dual force mains at new sewer pump stations as needed for redundancy.

E. Supervisory Control and Data Acquisition Systems (**SCADA**) is used to monitor 13 pump stations and notify staff of pump station failures. Staff are notified via pager of pump failure, and can make adjustments remotely via wireless computer.

Power outages and Pump station failures

Preventive Measures:

A. Backup Power – On site generators for back-up electrical power at most City pump stations.
B. Portable Generator Capability – Provide portable back-up generator capability sufficient to operate all sewer pump stations that do not have on-site generators or alternate power feeds.
C. Wet Wells –Sewer pump stations are provided with wet wells that have some retention time as well as having emergency pump down lines that can be connected to portable pumps.
D. Sewer Pump Station Maintenance Program – All pump stations locations are checked two days a week for proper operation. Scheduled preventative and corrective maintenance occurs on pump station electrical and mechanical components as well as contracted quarterly maintenance on the on-site generators.

Capital Improvement Program

Preventive Measures:

A. Infrastructure is monitored for capacity limitations and deterioration. Studies are performed to determine the impacts of growth and new development.
B. $1,400,000 a year is allocated to fund sewer rehabilitation projects such as re-lining and spot repairs on sewer mains and manhole reconstruction and pump station upgrades.